



Comprehensive Lead Based Paint Hazard Risk Assessment for the USFS Sheridan Work Center 201 Mill Street, Sheridan, MT 59749



Subject Property:

USFS Sheridan Work Center
201 Mill St.
Sheridan, MT 59749

Prepared for:

U.S. Department of Agriculture, Forest Service
Northern Region
203 Prairie Dr.
Butte, MT 59701

Prepared by:

GEM Environmental
415 N Higgins Ave.
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June 13th, 2016

Attention: Debbie Davis
US Department of Agriculture, Forest Service
203 Prairie Dr.
Butte, MT 59701

Phone: 406-782-5260
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Fax: 406-758-5861

**Reference: Comprehensive Lead Based Paint Hazard Risk Assessment Report
USFS Sheridan Work Center
201 Mill St.
Sheridan, MT 59749**

Dear Debbie Davis,

GEM Environmental, LLC (GEM) is pleased to provide the findings of the lead based paint Hazard Risk Assessment Report completed at the USFS Sheridan Work Center in Sheridan Montana, hereafter referred to as the 'site'. The field work was performed on April 12th, 2016 by Mr. Christopher Casas; an Environmental Protection Agency accredited Lead Based Paint Inspector (MT-I-148223-1). The risk assessment was conducted by Mr. Michael Foust, a certified risk assessor (MT-R-28404-1). Credentials are attached.

1.0 Lead Based Paint Hazard Risk Assessment

The purpose of the lead risk assessment was to confirm if lead based paint hazards at the subject property exist, to determine the location, type, and severity of existing or potential health hazards associated with exposures to lead. This report may help the client develop a plan for eliminating any confirmed lead based paint hazards and aid in developing a lead based paint maintenance and re-evaluation program.

As a result of the lead-based paint inspection conducted at the site, lead-based surface coatings (paints) were confirmed on the subject property as of the date of the inspection (April 12th, 2016). The analytical results from the inspection identified lead-based paint (LBP) as defined by the EPA and/ or HUD standards.

This report details the results of the investigation into lead based paint hazards. A copy of this report must be provided to each new lessee (tenant) or purchaser of this property under Federal Law (24 CFR part 35 and 40 CFR part 745) prior to a lease or sales contract. The complete report must also be provided to purchasers and made available to tenants. Landlords (lessors) and sellers are also required to distribute an education pamphlet approved by the U.S. Environmental Protection Agency (EPA), entitled "Protect your Family from Lead in Your Home", and include standard warning language in their leases or sales contracts. To ensure that parents have the required information to protect their children from lead based paint hazards.

2.0 Introduction

A LBP inspection was conducted at 201 Mill St., in Sheridan, Montana for the client. The inspection was conducted by Mr. Christopher Casas, a Certified Lead-Based Paint Inspector. The purpose of the inspection was to confirm or deny the presence of lead-based paint. As part of the Inspection, a visual survey of the property and structure was conducted and all painted surfaces were inventoried.

The comprehensive LBP testing, conformed with HUD guide lines 24 CFR 35 section 35.930 (c), (d). LBP is defined by EPA regulations under Title X (Residential Lead-Based Paint Hazard Reduction Act of 1992) as containing lead concentrations above 1.0 mg/cm² when measured by a portable XRF instrument or 0.5% by weight (5,000 parts per million) when measured by laboratory analysis.

The site is target housing owned by the U.S. Department of Agriculture, Forest Service, **HUD regulations do apply under Title X, Sections 1012 and 1013.**

Our methods and findings for the Inspection are presented in the following sections of this report.

Prior to initiating renovation activities at the site, an abatement plan should be prepared to address the containment, packaging, handling, transport, and disposal of the regulated lead-based paint identified at the site in order to satisfy regulatory requirements, as described in this report.

3.0 Scope of Risk Assessment

3.1 Scope of Work

The scope of work for this project included conducting a Lead Based Paint Hazard Risk Assessment inspection of one dwelling and associated property in accordance with 40 CFR 745.227. The LBP inspection of the dwelling and associated property will include the components throughout the accessible interior and exterior areas of the site. This work included visual assessment, collecting chemical assay data via a portable X-Ray Fluorescence Machine, and documentation of suspect and confirmed/assumed lead Based Paint as defined by the Environmental Protection Agency and State & local codes for Montana. This work also included recording the locations of the materials, estimated quantities +/- 10% of hazardous materials.

GEM performed a lead-based paint (LB) inspection and Lead Hazard Risk Assessment at 201 Mill St. in Sheridan Mt 59749. All painted and/or finished components were tested according to all applicable federal, state, and local regulations, and specifications described in protocols for LBP inspections and risk assessments from the housing and Urban Development (HUD) Guidelines chapter 7 (revised 2012).

In accordance with federal, state, and local regulations an action level of 1.0 $\frac{mg}{cm^2}$ was followed to determine the components that contained LBP.

This LBP inspection was performed prior to the U.S. Department of Agriculture, Forest Service selling the site and associated property.

The purpose for conducting the inspection is to ensure all local, state and federal regulations related to hazardous waste are complied with during the upcoming sale of the Site. GEM's scope of work for this project did not include preparation of abatement plans or specification documents.

3.2 Training Requirements

All individuals who performed XRF testing and conducted visual assessment hold EPA and/or State Licensure as Lead Inspectors and/or Risk Assessors and have been trained in the use, calibration, maintenance of the XRF, along with the principles of radiation safety, in accordance with the work practices of 40 CFR 745, section 227, for States and Indian Tribes.

3.3 Equipment

The XRF used for this evaluation was a Innov-x-alpha series bearing serial # 7076. GEM followed the performance characteristic sheet (PCS) for the specific X-ray fluorescence instrument (XRF) used during the LBP evaluation of the site. The XRF PCS is presented in Appendix G.

4.0 Site Description

The construction date of the building is not recorded on the property report card supplied by Montana Cadastral (<http://svc.mt.gov/msl/mtcadastral/>). Although the U.S. Department of Agriculture, Forest Service reports the construction date for the single-family style residential building is 1958. The building's ground level floor is approximately 1,240 SQFT. The building has an unfished basement and an attached garage of approximately 340 SQFT.

Exterior of the Building:

The building is constructed atop a concrete slab on grade with a concrete foundation. The exterior walls are finished with wood siding and trim. The exterior trim for the building includes gutters, downspouts, Fascia, and Soffits. The Windows include the following building components; aprons, casing, and mullions. The exterior doors including the following building components; casing, jamb, and apron.

Interior of the Building:

The interior of the building includes the following finish materials; vinyl sheet flooring, carpet, tongue and groove wood flooring, drywall, wood beams and sheathing. The interior building components include window aprons, casings, and mullions, and door casings, jambs, and aprons, one bath tub, one toilet, and three sinks. The building includes a large dining area, a kitchen, a Lobby, a bathroom, and 4 bedrooms.

Building Survey

Table 1: Building Survey

Date of Construction:	1958
Apparent Building Use:	U.S. Department of Agriculture, Forest Service Employee Housing
Setting:	Residential
Front Entry Faces:	South
Design:	Single Family Occupancy
Construction Type:	Wood joists, beams and framing
Lot Type:	Slight slope, drains to the north
Roof:	Fair (Asphalt Shingles), no apparent roof leaks
Foundation:	Good, no known basement leaks or visible foundation cracks
Front Lawn Condition:	Approx. 5% bare soil
Back Lawn Condition:	Aprox. 5% bare soil; no play structure
Drip Line Condition:	Some Paint chips along the driplines
Site Evaluation:	Good
Exterior Structural Condition:	Exterior structural is good and paint condition is poor to fair.
Interior Structural Condition:	Excellent
Overall Building/Site Condition:	Good
Garage	Attached w/ Concrete Slab

5.0 Management Data, Maintenance Data, Environmental Data, and Analyses

5.1 Maintenance Data

Table 2: Maintenance Data

Building Component	Paint Condition	Deterioration Due to Friction or Impact?	Deterioration due to Moisture?	Location of Painted Component with Visible Bite Marks
Building Siding	Fair	No	Yes	N/A
Exterior Trim	Fair	No	Yes	N/A
Window Troughs	Poor	No	No	N/A
Exterior Doors	Fair	No	Yes	N/A
Railings	Fair	No	Yes	N/A
Porch Floors	Fair	No	No	N/A
Other Porch Surfaces	Intact	No	No	N/A

Interior Doors	Fair (Door to Southeast bedroom is poor)	Yes	No	N/A
Ceilings	Intact	No	No	N/A
Walls	Intact			N/A
Interior Windows	Fair	No	No	N/A
Interior Floors	Fair	No	No	N/A
Interior Trim	Intact	No	No	N/A
Stairways	Fair	No	No	N/A
Radiator (or Radiator Cover)	Intact	No	No	N/A
Kitchen cabinets	Good	No	No	N/A
Bathroom cabinets	Fair	Yes	No	N/A
Other surfaces	N/A	N/A	N/A	N/A

Table 3: Building condition Form

Building Condition Form		
Condition	Yes	No
Roof missing parts of surfaces (tiles, boards, etc.)		X
Roof has holes or large cracks		X
Gutter or downspouts broken		X
Chimney masonry cracked, bricks loose or missing, obviously out of plumb		X
Exterior or interior walls have obvious large cracks or holes requiring more than routine painting		X
Exterior siding has missing boards or shingles		X
Water stains on interior walls or ceilings		X
Plaster walls deteriorated		X
Two or more windows or doors broken, missing or boarded up		X
Porch or steps have major elements broken, missing or boarded up		X
Foundation has major cracks, missing material, structural leans or visibly unsound		X
Total	None	None

6.0 Methods

The risk assessment of the residential dwelling was undertaken to located the existence of deteriorated paint, assess the extent and causes of the deterioration, and other potential lead-based paint hazards.

The following surfaces, using documented methodologies, which have distinct painting history were tested for the presence of lead.

GEM visually assessed the site for impact or friction surfaces and all other signs and presence of deteriorated paint.

GEM conducted the LBP risk assessment using the current recognized protocol as presented in Guidelines for the Evaluation and Control of Lead-Based Paint Hazards. ACM identified HAs of suspect LBP on interior and exterior surfaces for the site building, as described above, in general accordance with American Standards for Testing and Materials (ASTM) Method E 1729-05 and/or Chapter 7 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing.

Laboratory Information

Confirmation Paint Chip Samples were sent to Triangle Environmental Service Center (TESC) in Midlothian Virginia.

Table 4: Laboratory Information

Laboratory:	TESC
Address:	13509 E Boundary Rd. Suite B, Midlothian VA 23112
Lead Analysis Flame Atomic Absorption: Matrix: Wipe, Paint, Soil, Air	EPA Method 7420 & NIOSH Method 7082
AIHA/ELLAP ID:	100527
NYELAP/NELAC ID:	11413

6.1 Definitions

A **Room Equivalent** is an identifiable part of a residence, such as a room, foyer, staircase, hallway, house exterior or other exterior area. Exterior areas contain items such as play areas, painted swing sets, painted sandboxes, etc. Small closets or other similar areas adjoining rooms should not be considered as separate room equivalents unless they are obviously dissimilar from the adjoining room equivalent. However, walk-in closets should be considered as separate room equivalents.

Each room equivalent is made up of **Components**. Components may be located inside or outside a building. For example, room components could be ceilings, floors, walls, a door and its casing, a window sash, or window casings. The **Substrate** is the material underneath the paint of a component. Although many different substrates exist, HUD guidelines recommend **classifying substrates into one of six types: (1) brick; (2) concrete; (3) drywall; (4) metal, (5) plaster; and (6) wood**. If the true substrate under investigation is not one of the aforementioned types, HUD guidelines mandate that the inspector/risk assessor select the substrate type that most closely resembles one of the six defined substrate types. For substrates that are layered, such as plaster on

concrete, the substrate directly beneath the painted surface is identified during a LBP inspection. A **Testing Combination** is characterized by the room equivalent, component, and substrate. Visible color may not be an accurate predictor of painting history and is not included in the definition of a testing combination. Components that are coated with paint, varnish, shellac, stain, or other coating, including wallpaper (which may cover painted surfaces), should be considered as separate testing combinations (HUD Chapter 7 Glossary). Certain building components that are adjacent to each other and not likely to have different painting histories can be grouped together into a single testing combination as follows:

- Window casings, stops, jambs, and aprons
- Interior window mullions and window sashes (Interior window components may not be grouped with exterior window components)
- Exterior window mullions and window sashes
- Door jambs, stops, transoms, casings, and other door parts
- Door stiles, rails, panels, mullions, and other door parts
- Baseboards and associated trim (such as quarter-round or other caps)
- Painted electrical sockets, switches, or plates can be grouped with the walls

The **Test Location** is a specific area on a testing combination where the XRF was used to test for LBP.

NOTE: Components covered with vinyl or other factory-finished sidings were not inspected during the evaluation because the surfaces underneath these components were not visible or accessible. This leaves the possibility that LBP components could be located beneath these coverings.

De Minimis levels for deteriorated lead-based paint are defined follows: (1) Components with small surface areas (such as window sills, or baseboards) 10% of the surface area; (2) Interior Components with large surface areas (such as interior walls) 2 square feet of the surface area; and (3) Exterior components with large surface areas, 20 square feet of the surface area.

6.2 Sampling Strategies

According to the HUD guidelines, a lead reading by XRF of 1.0 mg/cm² or above is considered positive for the presence of LBP. An XRF reading below 1.0 mg/cm² is considered negative; however, a reading below 1.0 mg/cm² could still be harmful if proper precautions are not taken during activities that disturb these paint films. If there are any inconclusive readings, a paint-chip sample may be collected for laboratory analysis. Laboratory analysis of samples collected will only be performed by an EPA approved National Lead Laboratory Accreditation Program (NLLAP) laboratory. There is no inconclusive range for laboratory measurements/results.

Only painted, stained, varnished, or wallpapered components of a dwelling are tested during a LBP evaluation. Wall "A" or "1" in each room is the wall where the front entrance door opening is located (or aligned with street). Going clockwise and facing Wall "A" or "1", Wall "B" or "2" will always be to your right, Wall "C" or "3" directly to the rear and Wall "D" or "4" to the left. Doors, windows and closets are designated as left, center or right depending on their location on the wall. When more than one window/door is on a wall, features are numbered left to right.

6.3 Assessment Logic

A LBP evaluation is performed by use of the following assessment logic. Any paint found to contain lead below the HUD standard of 1.0 mg/cm², regardless of condition, is considered non-hazardous. Components having lead levels at or above the action level are visually assessed for condition and approximate surface area. The paint condition is placed into one of two categories using the risk assessor's professional judgment. These categories are: (1) intact (good) and (2) deteriorated (poor), based on the HUD Guidelines for Evaluation and Control of Lead-Based Paint Hazards in Housing, Chapter 5: Risk Assessment [Table 5-3], June, 2012.

6.4 Calibration of XRF Equipment

The calibration of the instrument is done in accordance with the Performance Characteristic Sheet (PCS) for this instrument. These instruments are calibrated using the paint film nearest 1.0 mg/cm² in the NIST Standard Reference Material (SRM) used (e.g. for NIST SRM 2579, 1.02 mg/cm² film would be used). Three calibration readings are taken before and after each home is tested to insure manufacturer's standards are met. If the inspection is longer than four hours, a set of three calibration readings must be taken before the four hours expires, and then an additional three calibration readings taken at the end of the inspection. If for any reason the instruments are not maintaining a consistent calibration reading within the manufacturer's standards for performance on the calibration block supplied by the manufacturer, manufacturer's recommendations are used to bring the instrument into calibration. If the instrument cannot be brought back into calibration, it is taken off the site and sent back to the manufacturer for repair and/or re-calibration.

6.5 Dust Wipe Samples

Dust samples were collected as there was lead-based paint identified on the exterior of the house. Samples were collected in accordance with requirements of ASTM Standard E-1728-16, Standard Practice of Field Collection of Settled Dust. Samples using Wipe Sampling methods for Lead Determination by Atomic Spectrometry Techniques. EPA, HUD and State window sills and floors. EPA, and HUD regulations define the following as hazardous levels for lead dust in residences: floors- $\geq 40 \frac{mg}{cm^2}$ (milligrams per square foot); interior window sills – $250 \frac{mg}{ft^2}$. the EPA has no dust-lead hazard standard for window troughs. Dust wipe samples were collected to identify locations where lead-in-dust levels exceed the regulatory standard, if lead was identified as per scope of work.

6.7 Soil Samples

Soil samples were collected at this residence because there was bare soil identified within the area of the identified Lead-based paint components. Soil samples were collected in accordance with the requirements of ATM standard E-1727, Standard Practice for Field Collection of Soil Samples for Lead Determination by Atomic Spectrometry Techniques. A composite sample is a mix of soil collected from a stated number of locations at the property. The samples were collected from bare soil areas. Soil standards including the EPA and HUD: guidance Levels of 1,200 µg/g for building perimeter and 400 µg/g for high contact play areas where used to evaluate samples collected around the perimeter of the house. No bare soil high-contact/play areas were observed on site.

7.0 Existing Lead-based Paint Hazards and Available Control Options

Table 5: Existing Lead-Based Paint Hazards and Available Control Options

Table 1: Existing Lead-Based Paint Hazards and Available Control Options				
LOCATION	COMPONENT	LEVEL OF SEVERITY	ABATEMENT OPTIONS	INTERIM CONTROL OPTIONS
Exterior Walls	Siding	Low	Component Removal & Disposal	Dispose of visible lead based paint debris & Paint Stabilization
Exterior Windows	Trim	Low	Component Removal & Disposal	Dispose of visible lead based paint debris & Paint Stabilization
Exterior Doors	Trim	Low	Component Removal & Disposal	Dispose of visible lead based paint debris & Paint Stabilization
Exterior Roof	Trim	Low	Component Removal & Disposal	Dispose of visible lead based paint debris & Paint Stabilization
Exterior Roof	Panels	Low	Component Removal & Disposal	Dispose of visible lead based paint debris & Paint Stabilization
Exterior Roof	Trusses	Low	Component Removal & Disposal	Dispose of visible lead based paint debris & Paint Stabilization
<p>NOTE – All contractors performing <i>abatement activities</i> are required to be certified by the State of Montana, ask to see their certification</p> <p>NOTE – Most <i>interim control activities</i> require an EPA certified renovator; ask to see their certification</p>				

7.1 Table of Lead Dust Hazards and Control Options

Table 6: Table of Lead Dust Hazards and Control Options

Sample #	Room Location	Surface	Lead Concentration in (ug/ft2)	Hazard Y / N	Abatement Control Option
1	06	Floor	38.1	N	None Recommended
2	07	Floor	<10.0	N	None Recommended
<p>HUD reporting limits – floors, 40 ug/ft2, window sills, 250 ug/ft2, window troughs 400 ug/ft2</p> <p>BRL – below reporting limits (Add if applicable - Note: window troughs were not readily accessible)</p>					

7.2 Table of Soil Lead Hazards and Control Options

Table 7: Table of Soil Lead Hazards and Control Options

Sample #	Sample Location	Lead level (ppm)	Hazard Y / N	Abatement Control Options
SL001	South East Corner of Building	111	N	None Recommended
SL002	South West Corner of Building	138	N	None Recommended
SL003	North Facing Side of Building	19.3	N	None Recommended
<p>Note – lead in soil is considered a hazard at 1200 ppm or greater. Play areas for children at 400 ppm. Vegetable garden soil should not have any lead. BRL – below reporting limits</p>				

8.0 Data Validation and Data Quality Assessment

The XRF instrument was calibrated to the manufacturer's standards prior to collecting field measurements and was checked periodically throughout the testing period against known NIST standards. All checks performed throughout the assessment were within 10% of one another. Overall, the precision, accuracy, method compliance, and completeness of the data set were determined to be acceptable based on the data submitted and reported.

9.0 Lead Hazard Control Plan:

9.1 Interim Control Options and Estimated Costs

To obtain cost estimates for interim control options and or abatement of identified lead based paint a certified Abatement Contractor or RRP certified firm, and/or individual, should be contacted.

9.2 Re-evaluation and Monitoring Schedule

Each of these treatments will need to be reexamined periodically to make certain that they remain effective and to ensure that new lead-based paint hazards do not appear. The interim controls shown above are less expensive initially, but they may be more expensive in the long run since they need to be reevaluated more frequently. The replacement and paint removal methods are more expensive initially, but do not require any reevaluation.

The owner should monitor the condition of the paint at least annual annually or if there is some indication that paint might be failing.

9.3 Site-Specific Lead Hazard Control Plan

1. Lead Hazard Control Option to Be Implemented in This Property;

The following LBP stabilization recommendations are based on U.S> Department of Housing and Urban Development (HUD) guidelines for the Evaluation and control of LBP hazards in housing with the second Edition, July 2012 revisions, and all state and local regulations.

According to Chapter 7 HUD guidelines (Second Edition, July 2012) if one testing combination (i.e. window, door) is positive for lead in an interior or exterior room equivalent, then all other similar testing combinations in those areas are also assumed to be positive for lead. Likewise, the same is true for negative readings. All inaccessible areas are assumed to be positive, even though they were not tested.

Inaccessible Areas:
The following areas were inaccessible at the time of inspection and should be assumed positive for the purpose of this report: None

Recommendations

GEM recommends stabilizing (using interim control paint stabilization techniques identified for HUD-owned single family dwellings in 24 CFR part 35 as amended June 21, 2004) the following components utilizing “lead safe work practices” as outlined in The Lead Safe Housing 24 CFR Part 35 as amended June 21, 2004:

Interior Components as Follows:

No LBP was detected at or above the HUD criterion of $1.0 \frac{mg}{cm^2}$ in the interior surfaces tested.

Exterior Components as Follows:

- 1) Hazard A: Exterior Window/Door Trim
- 2) Hazard B: Exterior Siding
- 3) Hazard C: Exterior Roof Trusses

The aforementioned components may be stabilized by removing the loose paint and other material from the surface of the substrate (e.g. we scraping, HEPA vacuuming) and applying new protective coating of paint, or by replacement (if feasible).

In order for paint stabilization methods to be successful, components must be dry, structurally sound, and waterproof. Interim Control Measures on Friction or impact surfaces, such as windows and doors, may lead to rapid treatment failure.

9.4 Property Conditions Affected by Lead-Based Paint

Bare Soil: None

Excessive Dust: None

Note: it is the lead hazard reduction contractor's responsibility to follow all city, state and federal regulations when performing lead hazard reduction activities, and to confirm all quantities and conditions.

<u>DETERIORATED AREA SUMMARY</u>				
Reading Number	Component/Area Deteriorated	Type of deterioration	Reason Deteriorated	Est. SQFT/LF of Deteriorated Area
87	Exterior Siding	Chip/Peel	Weather	225.2 SQFT
85	Exterior Trim	Chip/Peel	Weather	77.82 LF
88	Exterior Roof Panels/Trusses	Chip/Peel	Weather	71.08 SQFT
TOTAL SQFT / LF				296.28 SQFT / 77.82 LF

10.0 Conclusions

The components listed in Table 5.0 were found “positive” for lead, as defined by the EPA and HUD as containing lead in concentrations equal to or greater than 1.0 mg/cm².

According to Chapter 7 HUD guidelines (Second Edition, 2012), if one testing combination (i.e. window, door) is positive for lead in an interior or exterior room equivalent, then all other similar testing combinations in those areas are also assumed to be positive for lead. Likewise, the same is true for negative readings. All inaccessible areas are assumed to be positive, even though they were not tested. Any inaccessible areas encountered during the LBP evaluation are noted in Section 9.3.

Given that the lead evaluation results indicated the presence of lead-based paint, the prospective owner may wish to obtain, at their expense, the additional services of a lead-based paint risk assessor, certified in the State in which the property is located, to help understand the positive results. This person would review the report provided by USFS, and might re-evaluate any area(s) in question and/or additional areas, and might make additional recommendations about lead hazard control actions.

This evaluation was completed in accordance with Lead Safe Housing Rule 24 CFR Part 35 subpart F as amended (2004). The sampling results are presented in Appendix C, D, and E. The outline of the dwelling is drafted in Appendix A. Appendix F contains photographs of the property. Appendix B contains the personal certifications of the inspector. Appendix G contains the performance characteristics sheets for the XRF instrument and Appendix H contains a glossary of terms. HUD, for whom this report is prepared, has the option to evaluate the quality of this LBP inspection and visual assessment per Chapter 7 of the HUD guidelines (Second Edition, July 2012). These evaluation methods can include direct observation, immediate provision of results, repeated testing, and time-and-motion analysis.

Those components which were found to contain LBP and which were in intact condition should be monitored by the owner of the dwelling; any further deterioration of components or components that are already in poor condition should undergo corrective action to maintain the LBP surface. In addition, some painted surfaces may contain levels of lead below 1.0 mg/cm²; these components could create lead dust or lead-contaminated soil hazards if the paint is turned into dust by abrasion, scraping, sanding or friction. If conditions of intact paint surfaces become destabilized, these conditions will need to be addressed in the future. If any construction or modernization work is done on the premises, this report should be given to the contractors, as well as to any future tenants.

In compliance with HUD's Final Rule, potential hazards resulting from LBP must be subjected to corrective action to stabilize all deteriorated LBP in housing built before 1978, unless the property is exempt. Paint stabilization repairs any defect in the substrate and/or in building components that are causing the paint deterioration, removes all loose paint and other material from the surface to be treated utilizing lead-safe work practices, and, in most cases, applies a new protective coating or paint. Any stabilization/construction activities which affect the existing paint films (including sanding and demolition) must be initiated by workers who have received proper training in the handling of lead-contaminated materials.

Furthermore, all workers potentially exposed to lead dust hazard are regulated under The Occupational Health and Safety Administration (OSHA) Lead in Construction Standard. Which states that "negative" readings (i.e. those below the HUD/EPA definition of what constitutes LBP ($1.0 \frac{mg}{cm^2}$) **DO NOT** relieve contractors from performing exposure assessments (personal air monitoring) on their employees per the OSHA lead standard, and should not be interpreted as lead free. Although a reading may indicate "negative", airborne lead concentrations still may exceed the OSHA action level or the OSHA permissible Exposure Limit (PEL) depending on the work activity from any Lead-containing Paint (LCP).

Upon completion of paint stabilization activities, HUD requires an inspection examination to determine that the paint stabilization efforts were performed adequately. An inspection examination will include a visual assessment of all surfaces that were determined to be defective during the initial evaluation, and collection of dust and soil composite samples. It should be determined that the deteriorated paint surfaces have been eliminated and that no settled dust hazards or paint chips exist in the interior or exterior. The inspection report must be signed by a Certified/Licensed Lead Inspector or Risk Assessor.

11.0 Limitations

This lead Hazard Risk Assessment summary was prepared based on information gathered during our site visits, phone conversations with the Client, and interpretations of chemical assays collected during the inspection. The inspection was comprehensive to the referenced building. Supplemental inspection and sampling may be required if additional lead HAs had been exposed during excavation, demolition, or if the scope of work is expanded to include additional buildings or buried/underground piping that have not been inspected or analyzed for lead content.

It should be understood that conditions may change due to deterioration or maintenance. The Results and material conditions noted within this report were accurate at the time of the evaluation and in no way reflect the conditions at the property after the date of evaluation. No other environmental concerns or conditions were addressed during this evaluation.

If you have any questions regarding this report, please call me at 406.370.4139. We look forward to working with you in the future.

Sincerely,

A handwritten signature in black ink that reads "Mike Foust". The signature is written in a cursive, slightly slanted style.

Michael Foust

Inspector/Risk Assessor
EPA Certification Number (MT-R-28404-1)

Comprehensive Lead Based Paint Risk Assessment Report
USFS Sheridan Work Center
201 Mill St.
Sheridan, MT 59749

Appendix A

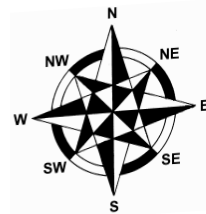
Appendix A – Site Location Reference



U.S. Department of Agriculture, Forest Service
Northern Region 203 Prairie Dr.
Butte, MT 59701

Property Location Reference

Date:	Scale:	Drawn:
05/30/16	NO SCALE	CEC



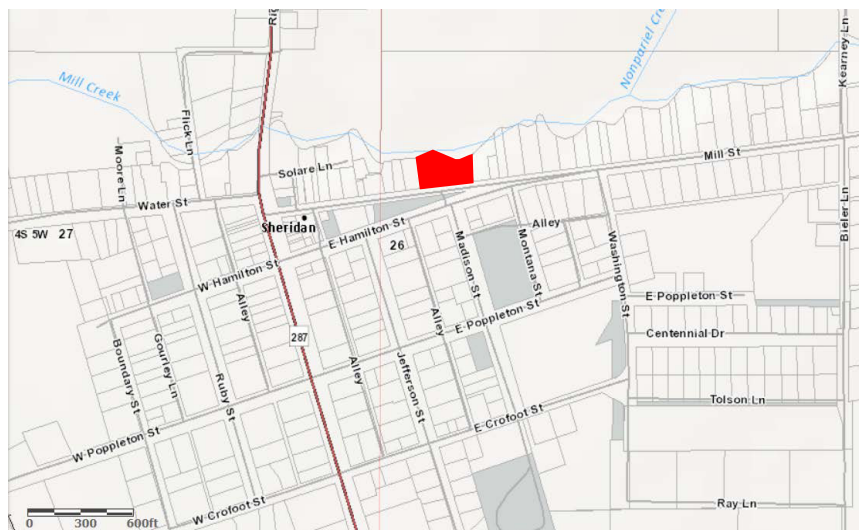
Prepared By: GEM ENVIRONMENTAL

LEGEND



Site Location

Property Location
Residential Dwelling
103 Anderson PL.
Polson, MT 59860



Montana County Seats



Comprehensive Lead Based Paint Risk Assessment Report
USFS Sheridan Work Center
201 Mill St.
Sheridan, MT 59749

Appendix A

Appendix B- Documentation of Accreditation

United States Environmental Protection Agency

This is to certify that



Mike A Foust

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

In the Jurisdiction of:

Montana

This certification is valid from the date of issuance and expires December 03, 2018

MT-R-28404-1

Certification #

November 19, 2015

Issued On



Adrienne Priselac, Manager, Toxics Office

Land Division

Comprehensive Lead Based Paint Risk Assessment Report
USFS Sheridan Work Center
201 Mill St.
Sheridan, MT 59749

Appendix C

Appendix C- Dust Wipe Laboratory Report

TRIANGLE ENVIRONMENTAL SERVICE CENTER, INC.

13509 East Boundary Road, Suite B, Midlothian, VA 23112 • 804-739-1751 • fax: 804-739-1753

LEAD IN WIPE SAMPLE ANALYSIS SUMMARY

(EPA METHOD 7420)

CLIENT: GEM Environmental
415 N Higgins St. Ste. 127
Missoula, MT 59802

TESC LOGIN #: 160520P

DATE OF RECEIPT: 5/20/2016
DATE OF ANALYSIS: 5/20/2016
DATE OF REPORT: 5/23/2016

CLIENT JOB #: 16-023

JOB SITE:

ANALYST: MHB

TESC SAMPLE #	CLIENT SAMPLE #	SAMPLE AREA (ft ²)	TOTAL LEAD (ug)	LEAD CONCENTRATION (ug/ft ²)
1	WP001	1.00	38.1	38.1
2	WP002	1.00	<10.0	<10.0

Total Sample(s) Analyzed: 2

Reviewed By Authorized Signatory:



Feng Jiang, MS Senior Geologist, Laboratory Director
Yuedong Fang, Senior Geologist

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Results represent the analysis of samples submitted by the customer. Sample information was provided by the customer. This report must not be reproduced, except in full, without the written consent of Triangle Environmental Service Center, Inc. The test report related only to the item(s) tested. This analysis was performed by an AHIA accredited laboratory. AIHA/ELLAP ID: 100527, NYELAP/NELAC ID: 11413.

Minimum Reporting Limit: 10.0 ug. EPA Lead Hazards Std: 40 ug/ft² floors and 250 ug/ft² interior window sills, based on weighted avg of all samples taken. EPA Clearance Std: 40 ug/ft² floors, 250 ug/ft² interior window sills; 400 ug/ft² window troughs. MDLs and resulting reporting limits are based on ASTM E 1792 compliant media. [LEGEND: ft²= per square feet, ug= microgram, ug/ft²= microgram/per square feet]

Triangle Environmental Service Center, Inc.
Chain of Custody
13509 E Boundary Road, Suite B, Midlothian, VA 23112
Tel: (804) 739-1751, Fax: (804) 739-1753

TESC Login Number:					
Company: CEM Environmental			Zip/Postal Code: 59802		
Street: 415 N Higgins Ave			Telephone #: 406-370-4139		
City: Missoula		State/Province: MT		Fax:	
Report To (Name): Christopher Casas			Country: U.S.		
Email Address: cm File			Please provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		
Project Name/Number: 16-023					
U.S State samples Taken: Montana					
Turn Around Time		Asbestos	Lead		
<input type="checkbox"/> 2 Hours * <input type="checkbox"/> 6 Hours * <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 3 Days <input type="checkbox"/> 5 Days		<input type="checkbox"/> PLM <input type="checkbox"/> PCM <input type="checkbox"/> PLM Point Count 400 <input type="checkbox"/> PLM Point Count 1000 <input type="checkbox"/> PLM Gravimetric <input type="checkbox"/> CARB 435 (Soil Only) <input type="checkbox"/> TEM AHERA Air <input type="checkbox"/> TEM Air EPA Level II <input type="checkbox"/> TEM Bulk Chatfield	<input type="checkbox"/> Air <input checked="" type="checkbox"/> Paint (% & PPM) <input checked="" type="checkbox"/> Soil(PPM) <input checked="" type="checkbox"/> Wipe <input type="checkbox"/> TCLP (Pb) <input type="checkbox"/> Waste Water <input type="checkbox"/> Drinking Water <input type="checkbox"/> TCLP RARA 8 <input type="checkbox"/> CAM 17 <input type="checkbox"/> Welding Fume <input type="checkbox"/> Toxic Metal Profile		
<input checked="" type="checkbox"/> notify us 24 hour in advance <input type="checkbox"/> Check for Positive Stop					
Air Quality/Mold					
<input type="checkbox"/> Biocassette <input type="checkbox"/> Slide <input type="checkbox"/> Surface tape <input type="checkbox"/> Surface Swab <input type="checkbox"/> Bulk					
Samplers Name:			Samplers Signature:		
Sample #:	Material Description:	Volume/Area	Sample Date		
S1001	Soil		4/12/16		
S1002	Soil				
S1003	Soil				
P1001	Paint - Bulk				
Wp001	WIPC	1 Frz	4/12/16		
Wp002	WIPC	1 Frz	4/12/16		
Client Sample #(s):		Total # of Samples:	5		
Relinquished (Client):		Date:	5/19/16	Time: 1:31	
Received (Lab):		Date:		Time:	
Special Instructions:		SPR20/16 10 ~~~~~			

Comprehensive Lead Based Paint Risk Assessment Report
USFS Sheridan Work Center
201 Mill St.
Sheridan, MT 59749

Appendix D

Appendix D- XRF Analytical Report

Date	Reading	Mode	LiveTime	MN1	Pass/Fail	Pass Fail Standard	Date	Pb	Pb +/-	Pb Pass	Room	Side	Quadrant	Component	Substrate	Color	Condition	Notes	Time
11-Apr-16	1	Standardiz	49.01	212	-0.013998	PASS	11-Apr-16											WhiteFish Sen Center - ext - roof sheet metal	10:14:08
11-Apr-16	2	Lead Paint	9.99	0.12		Negative	11-Apr-16	0.11	0.06			South	Middle		Metal	Green	Intact	usfs res- base trim	10:15:55
11-Apr-16	3	Lead Paint	19.47	0.03	surface	Negative	11-Apr-16	0.04	0.01			North	Middle		Wood	White	Intact	usfs res- base trim	10:20:08
11-Apr-16	4	Lead Paint	12.29	0.05	surface	Negative	11-Apr-16	0.13	0.03			South	Middle		Wood	White	Intact	usfs res- base trim	10:21:22
11-Apr-16	5	Lead Paint	9.86	0.07	surface	Negative	11-Apr-16	0.11	0.04			East	Middle		Wood	White	Intact	usfs res- base trim	10:22:32
11-Apr-16	6	Lead Paint	5.59	0.01		Negative	11-Apr-16	0	0			West	Middle		Drywall	Beige	Intact	usfs res- wall beige	10:25:18
11-Apr-16	7	Lead Paint	19.11	0.02		Insufficient	11-Apr-16	0	0.01			North	Middle		Drywall	Beige	Intact	usfs res- wall maroon	10:26:29
11-Apr-16	8	Lead Paint	24.1	0		Negative	11-Apr-16	0	0			North	Middle		Drywall	Beige	Intact	usfs res- wall maroon	10:27:05
11-Apr-16	9	Lead Paint	18	0		Negative	11-Apr-16	0	0			East	Middle		Drywall	Beige	Intact	usfs res- wall beige	10:28:33
11-Apr-16	10	Lead Paint	15.94	0.08	surface	Negative	11-Apr-16	0.14	0.04			East	Middle		Drywall	Beige	Intact	usfs res- wall white door trim	10:29:53
11-Apr-16	11	Lead Paint	7.65	0.07	surface	Negative	11-Apr-16	0.08	0.03			East	Middle		Drywall	Beige	Intact	usfs res- wall white door trim	10:30:31
11-Apr-16	12	Lead Paint	14.67	0		Negative	11-Apr-16	0	0				Middle		Vinyl	Beige	Intact	usfs res- rm02- vaf flooring	10:32:38
11-Apr-16	13	Lead Paint	19.26	0.05	surface	Negative	11-Apr-16	0.32	0.03				Middle		Ceramic	White	Intact	usfs res- rm02- Bathtub	10:33:31
11-Apr-16	14	Lead Paint	3.53	0.08		Positive	11-Apr-16	1	0.04				Middle		Ceramic	White	Intact	usfs res- rm02- toilet	10:34:46
11-Apr-16	15	Lead Paint	18.77	0		Negative	11-Apr-16	0	0				Middle		Ceramic	White	Intact	usfs res- rm02- sinks	10:35:53
11-Apr-16	16	Lead Paint	7.13	0		Negative	11-Apr-16	0	0						Ceramic	White	Intact	usfs res- rm02- walls ceramic	10:37:34
11-Apr-16	17	Lead Paint	9.29	0		Negative	11-Apr-16	0	0						Drywall	Blue	Intact	usfs res- rm02- blue walls	10:38:18
11-Apr-16	18	Lead Paint	15.41	0.05		Negative	11-Apr-16	0.03	0.02						Ceramic	Brown	Intact	usfs res- rm02- 12x12 ct above shower	10:39:14
11-Apr-16	19	Lead Paint	6.47	0.02		Negative	11-Apr-16	0.01	0.01						Drywall	White	Intact	usfs res- rm02- white ceilings	10:43:19
11-Apr-16	20	Lead Paint	15.73	0.03	surface	Negative	11-Apr-16	0.04	0.02					Floor	Wood		Intact	usfs res- rm03- wood glazing	10:45:14
11-Apr-16	21	Lead Paint	8.65	0.05	surface	Negative	11-Apr-16	0.09	0.03			North			Wood		Intact	usfs res- rm03- base trim	10:46:21
11-Apr-16	22	Lead Paint	8.04	0		Negative	11-Apr-16	0	0			North			Drywall		Intact	usfs res- rm03- blue wall	10:48:00
11-Apr-16	23	Lead Paint	9.84	0.01		Negative	11-Apr-16	0	0			North			Wood		Intact	usfs res- rm03- white window trim	10:48:42
11-Apr-16	24	Lead Paint	9.25	0		Negative	11-Apr-16	0	0			South			Drywall		Intact	usfs res- rm03- white wll	10:49:36
11-Apr-16	25	Lead Paint	6.64	0		Negative	11-Apr-16	0	0			East			Drywall		Intact	usfs res- rm03- blue wall	10:50:24
11-Apr-16	26	Lead Paint	10.13	0.06	surface	Negative	11-Apr-16	0.12	0.03			East			Drywall		Intact	usfs res- rm03- white door frame	10:51:31
11-Apr-16	27	Lead Paint	15.76	0.03		Negative	11-Apr-16	0.01	0.01						Wood		Intact	usfs res- rm04- wood flooring	10:52:51
11-Apr-16	28	Lead Paint	10.53	0		Negative	11-Apr-16	0	0						Wood		Intact	usfs res- rm04- wood flooring	10:54:04
11-Apr-16	29	Lead Paint	14.21	0		Negative	11-Apr-16	0	0			East			Drywall		Intact	usfs res- rm04- beige walls	10:57:47
11-Apr-16	30	Lead Paint	15.56	0		Negative	11-Apr-16	0	0			East			Drywall		Intact	usfs res- rm04- beige walls	11:00:08
11-Apr-16	31	Lead Paint	7.96	0		Negative	11-Apr-16	0	0			South			Drywall		Intact	usfs res- rm04- white walls	11:01:43
11-Apr-16	32	Lead Paint	8.73	0.06	surface	Negative	11-Apr-16	0.15	0.03			South			Wood		Intact	usfs res- rm04- white trim	11:02:06
11-Apr-16	33	Lead Paint	9.24	0.08	surface	Negative	11-Apr-16	0.1	0.04			North			Drywall		Intact	usfs res- rm05- white walls	11:16:05
11-Apr-16	34	Lead Paint	11.53	0.17		Insufficient	11-Apr-16	0.11	0.08			South			Drywall		Intact	usfs res- rm05- white walls	11:16:40

11-Apr-16	35	Lead Paint	16.63	0	Negative	11-Apr-16	0	0	East		Drywall	Intact	usfs res- rm05- white walls	11:17:24	
11-Apr-16	36	Lead Paint	4.3	0.07	Insufficient	11-Apr-16	0.04	0.04	West		Drywall	Intact	usfs res- rm05- white walls	11:18:05	
11-Apr-16	37	Lead Paint	11.49	0.05 surface	Negative	11-Apr-16	0.06	0.03	West		Drywall	Intact	usfs res- rm05- white walls	11:18:25	
11-Apr-16	38	Lead Paint	5.51	0.03	Negative	11-Apr-16	0.02	0.02	Middle		Drywall	Intact	usfs res- rm05- white ceilings	11:19:53	
11-Apr-16	39	Lead Paint	9.81	0.06 surface	Negative	11-Apr-16	0.11	0.03	Middle		Wood	Intact	usfs res- rm05- maroon cabinets	11:21:02	
11-Apr-16	40	Lead Paint	9.78	0.08 surface	Negative	11-Apr-16	0.2	0.04	Middle		Wood	Intact	usfs res- rm05- green cabinets	11:21:45	
11-Apr-16	41	Lead Paint	13.9	0.09 surface	Negative	11-Apr-16	0.15	0.05	Middle		Wood	Intact	usfs res- rm05- yellow trim cabinets	11:22:39	
11-Apr-16	42	Lead Paint	3.75	0.04	Insufficient	11-Apr-16	0.01	0.02	Middle		Wood	Intact	usfs res- rm05- mica board cabinets	11:24:28	
11-Apr-16	43	Lead Paint	7.01	0.06	Negative	11-Apr-16	0.04	0.03	Middle		Wood	Intact	usfs res- rm05- mica board cabinets	11:24:46	
11-Apr-16	44	Lead Paint	10.17	0	Negative	11-Apr-16	0	0	Middle		Wood	Intact	usfs res- rm05- mica board cabinets	11:25:09	
11-Apr-16	45	Lead Paint	20.34	0	Negative	11-Apr-16	0	0	Middle		Wood	Intact	usfs res- rm05- window trim	11:26:02	
11-Apr-16	46	Lead Paint	8.46	0	Negative	11-Apr-16	0	0	Middle		Wood	Intact	usfs res- rm05- window trim	11:26:43	
11-Apr-16	47	Lead Paint	7.02	0	Negative	11-Apr-16	0	0	Middle		Wood	Intact	usfs res- rm07- wood flooring	11:27:58	
11-Apr-16	48	Lead Paint	17.04	0.03 surface	Negative	11-Apr-16	0.05	0.02	Middle		Wood	Intact	usfs res- rm07- base trim	11:28:58	
11-Apr-16	49	Lead Paint	11.04	0	Negative	11-Apr-16	0	0	Middle		Wood	Intact	usfs res- rm07- window trim	11:30:17	
11-Apr-16	50	Lead Paint	6.25	0	Negative	11-Apr-16	0	0	Middle		Wood	Intact	usfs res- rm07- window trim	11:30:44	
11-Apr-16	51	Lead Paint	14.11	0	Negative	11-Apr-16	0	0	Middle		Concrete	Brown	Intact	usfs res- rm07- concrete fire place- brown	11:31:51
11-Apr-16	52	Lead Paint	10.38	0	Negative	11-Apr-16	0	0	Middle		Ceramic	Brown	Intact	usfs res- rm07- ceramic tiles fire place- brown	11:33:00
11-Apr-16	53	Lead Paint	7.19	0.74	Insufficient	11-Apr-16	0.33	0.37	Middle		Metal	Black	Intact	usfs res- rm07- black fir place	11:33:49
11-Apr-16	54	Lead Paint	23.52	0.23	Negative	11-Apr-16	0.2	0.12	Middle		Metal	Black	Intact	usfs res- rm07- black fir place	11:34:18
11-Apr-16	55	Lead Paint	8.04	0	Negative	11-Apr-16	0	0	North	Middle	Drywall	Pink	Intact	usfs res- rm07- wall pink	11:35:46
11-Apr-16	56	Lead Paint	16.95	0.01	Negative	11-Apr-16	0	0.01	East	Middle	Drywall	Beige	Intact	usfs res- rm07- wall beige	11:36:40
11-Apr-16	57	Lead Paint	11.53	0	Negative	11-Apr-16	0	0	West	Middle	Drywall	Beige	Intact	usfs res- rm07- wall beige	11:37:39
11-Apr-16	58	Lead Paint	16.72	0	Negative	11-Apr-16	0	0	South	Middle	Drywall	Beige	Intact	usfs res- rm07- wall beige	11:38:18
11-Apr-16	59	Lead Paint	16.51	0.03	Negative	11-Apr-16	0.02	0.01	East	Middle	Drywall	Beige	Intact	usfs res- rm07- wall beige	11:39:00
11-Apr-16	60	Lead Paint	8.08	0	Negative	11-Apr-16	0	0	East	Middle	Drywall	Beige	Intact	usfs res- rm07- wall beige	11:39:32
11-Apr-16	61	Lead Paint	3.1	0.05	Negative	11-Apr-16	0.02	0.03	North	Middle	Drywall	White	Intact	usfs res- rm09- wall white	11:40:48

11-Apr-16	62 Lead Paint	5.03	0.05 surface	Negative	11-Apr-16	0.08	0.03		North	Middle	Wood	Blue	Intact	usfs res- rm09-staircase blue	11:41:49
11-Apr-16	63 Lead Paint	12.83	0	Negative	11-Apr-16	0	0		North	Middle	Wood	Blue	Intact	usfs res- rm09-staircase white	11:42:28
11-Apr-16	64 Lead Paint	12.82	0.03 surface	Insufficient	11-Apr-16	0.07	0.01		North	Middle	Concrete	Grey	Intact	usfs res- rm09-sgrey flooring	11:43:38
11-Apr-16	65 Lead Paint	1.68	0.07 surface	Insufficient	11-Apr-16	0.07	0.04		North	Middle	Concrete	Grey	Intact	usfs res- rm09-sgrey flooring	11:44:05
11-Apr-16	66 Lead Paint	5.45	0.05 surface	Insufficient	11-Apr-16	0.09	0.02		North	Middle	Concrete	Grey	Intact	usfs res- rm09-sgrey flooring	11:44:20
11-Apr-16	67 Lead Paint	21.33	0.02 surface	Insufficient	11-Apr-16	0.09	0.01		North	Middle	Concrete	Grey	Intact	usfs res- rm09-sgrey flooring	11:44:39
11-Apr-16	68 Lead Paint	25.02	0.02 surface	Negative	11-Apr-16	0.06	0.01		North	Middle	Concrete	Grey	Intact	usfs res- rm09-sgrey flooring	11:45:17
11-Apr-16	69 Lead Paint	8	0.02	Insufficient	11-Apr-16	0.02	0.01		North	Middle	Drywall	Green	Intact	usfs res- rm09-green walls	11:46:58
11-Apr-16	70 Lead Paint	5.31	0.02	Positive	11-Apr-16	1	0.01		East	Middle			Intact	usfs res- rm09-sink	11:47:57
11-Apr-16	71 Lead Paint	3.11	0.05	Positive	11-Apr-16	1	0.02		East	Middle	Drywall	White	Intact	usfs res- rm09-white walls	11:49:38
11-Apr-16	72 Lead Paint	6.23	0.07	Negative	11-Apr-16	0.05	0.04		East	Middle	Drywall	White	Intact	usfs res- rm09-white walls	11:50:11
11-Apr-16	73 Lead Paint	7.55	0	Negative	11-Apr-16	0	0		East	Middle	Drywall	White	Intact	usfs res- rm09-white walls	11:50:33
11-Apr-16	74 Lead Paint	7.55	0	Negative	11-Apr-16	0	0		East	Middle	Drywall	White	Intact	usfs res- rm09-white walls	11:50:54
11-Apr-16	75 Lead Paint	2.78	0.04	Insufficient	11-Apr-16	0.02	0.02		East	Middle	Drywall	White	Intact	usfs res- rm09-white walls	11:51:15
11-Apr-16	76 Lead Paint	7.02	0	Negative	11-Apr-16	0	0			Middle	Metal	Black	Intact	usfs res- rm09-poop pipe	11:52:25
11-Apr-16	77 Lead Paint	6.29	0.01	Negative	11-Apr-16	0	0			Middle	Wood	Beige	Intact	usfs res- rm10-wall- beige	11:53:36
11-Apr-16	78 Lead Paint	10.36	0.06	Insufficient	11-Apr-16	0.03	0.03		North	Middle	Wood	Green	Intact	usfs res- rm10-wall- green	11:54:18
11-Apr-16	79 Lead Paint	7.92	0.06	Insufficient	11-Apr-16	0.03	0.03		East	Middle	Concrete	Green	Intact	usfs res- rm10-wall- green	11:55:01
11-Apr-16	80 Lead Paint	2.79	0.18	Insufficient	11-Apr-16	0.11	0.09		East	Middle	Concrete	White	Intact	usfs res- rm10-closet- walls white	11:56:03
11-Apr-16	81 Lead Paint	10.45	0.03 surface	Negative	11-Apr-16	0.03	0.01		East	Middle	Concrete	White	Intact	usfs res- rm10-closet- walls white	11:56:14
11-Apr-16	82 Lead Paint	11	0.07	Negative	11-Apr-16	0.05	0.03		West	Middle	Concrete	White	Intact	usfs res- rm10-closet- walls white	11:56:47
11-Apr-16	83 Lead Paint	7.94	0.05 surface	Negative	11-Apr-16	0.06	0.03		South	Middle	Concrete	White	Intact	usfs res- rm10-closet- walls white	11:57:21
11-Apr-16	84 Lead Paint	8.07	0.01	Negative	11-Apr-16	0	0		South	Middle	Concrete	Red	Intact	usfs res-ext-cōncrete foundation	12:06:19
11-Apr-16	85 Lead Paint	21.32	0.27 surface	Positive	11-Apr-16	3.04	0.13		South	Middle	Wood	White	Intact	usfs res-ext-siding	12:06:58
11-Apr-16	86 Lead Paint	10.97	0	Negative	11-Apr-16	0	0		South	Middle	Wood	Red	Intact	usfs res-ext-window trim	12:08:16
11-Apr-16	87 Lead Paint	8.69	0.26 surface	Positive	11-Apr-16	1.75	0.13		South	Middle	Wood	Red	Intact	usfs res-ext-roof trim	12:09:33
11-Apr-16	88 Lead Paint	7.86	0.33 surface	Positive	11-Apr-16	1.97	0.16		South	Middle	Wood	White	Intact	usfs res-ext-roof	12:11:20
11-Apr-16	89 Lead Paint	11.12	0.17 surface	Positive	11-Apr-16	1.33	0.08		South	Middle	Wood	White	Intact	usfs res-ext-rooftruss	12:12:12
11-Apr-16	90 Lead Paint	9.73	0.12 surface	Negative	11-Apr-16	0.63	0.06		South	Middle	Wood	Red	Intact	usfs res-ext-door trim	12:12:57
11-Apr-16	91 Lead Paint	8.3	0	Negative	11-Apr-16	0	0		South	Middle	Wood	Red	Intact	usfs res-ext-door trim	12:13:17
11-Apr-16	92 Lead Paint	6.26	0	Negative	11-Apr-16	0	0		South	Middle	Wood	Red	Intact	usfs res-ext-door trim	12:13:34

11-Apr-16	93 Lead Paint	10.81	0	Negative	11-Apr-16	0	0	South	Middle	Wood	Red	Intact	usfs res-ext-door trim	12:13:55
11-Apr-16	94 Lead Paint	12.09	0	Negative	11-Apr-16	0	0	South	Middle	Wood	Red	Intact	usfs res-ext-door trim	12:14:21



Denotes measurements greater than the HUD criterion of 1.0 g/cm²



Denotes measurements less than the HUD criterion on of 1.0 g/cm²

Comprehensive Lead Based Paint Risk Assessment Report
USFS Sheridan Work Center
201 Mill St.
Sheridan, MT 59749

Appendix E

Appendix E- Soil Sample Laboratory Report

TRIANGLE ENVIRONMENTAL SERVICE CENTER, INC.

13509 East Boundary Road, Suite B, Midlothian, VA 23112 • 804-739-1751 • fax: 804-739-1753

LEAD IN SOIL SAMPLE ANALYSIS SUMMARY

(EPA METHOD 7420)

CLIENT: GEM Environmental
415 N Higgins St. Ste. 127
Missoula, MT 59802

TESC LOGIN #: 160520M

DATE OF RECEIPT: 5/20/2016
DATE OF ANALYSIS: 5/21/2016
DATE OF REPORT: 5/23/2016

CLIENT JOB #: 16-023

JOB SITE:

ANALYST: HI

TESC SAMPLE #	CLIENT SAMPLE #	SAMPLE WEIGHT (mg)	LEAD CONCENTRATION (% by Weight)	LEAD CONCENTRATION PPM
1	SL001	538	0.0111	111
2	SL002	502	0.0138	138
3	SL003	520	<0.00193	<19.3

Total Sample(s) Analyzed: 3

Reviewed By Authorized Signatory:



Feng Jiang, MS Senior Geologist, Laboratory Director
Yuedong Fang, Senior Geologist

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Results represent the analysis of samples submitted by the customer. Sample information was provided by the customer. This report must not be reproduced, except in full, without the written consent of Triangle Environmental Service Center, Inc. The test report related only to the item(s) tested. This analysis was performed by an AHIA accredited laboratory. AIHA/ELLAP ID: 100527, NYELAP/NELAC ID: 11413.

Minimum Reporting Limit: 20 ug. EPA Soil Std for bare residential soil: 400 ppm by wt in play areas; 1200 ppm by wt in bare soil in the remainder of the yard based on an avg of all other samples collected. EPA does not distinguish between lead-contaminated soil and soil-lead hazards. Soil samples are tested as received unless noted as "Dried before analysis." [LEGEND: mg= milligram, ug= microgram, ppm= parts per million]



Chain of Custody

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Comprehensive Lead Based Paint Risk Assessment Report
USFS Sheridan Work Center
201 Mill St.
Sheridan, MT 59749

Appendix F

Appendix F- Photo Log

Phot Log of Confirmed LBP
USFS Sheridan Work Center
201 Mill St.
Sheridan MT

White Coating on Exterior Siding

Coating Condition- Mostly Intact, Flaky, and Peeling portions

XRF Results: 3.04 mg/cm^2



Maroon Coating on Exterior Window Trim

Coating Condition: Mostly Intact, flaky and peeling portions

XRF Result: 1.75 mg/cm^2



Maroon coating on Exterior Door Trim

Coating Condition: Mostly Intact, Flaky and peeling portions

XRF Result: 1.75 mg/cm^2



Maroon coating on Exterior Roof Trim

Coating Condition: Mostly Intact, Flaky and peeling portions

XRF Result: 1.75 mg/cm^2



White Coating on Roof Wood Panels

Coating Condition: Mostly Intact, Flaky and Peeling Portions

XRF Result: 1.97 mg/cm^2



White Coating on Wood Trusses

Coating Condition: Mostly Intact, Flaky and Peeling Portions

XRF Result: 1.33 mg/cm^2



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Appendix G

Appendix F – PCS Sheet

Performance Characteristic Sheet

EFFECTIVE DATE: December 1, 2006

EDITION NO.: 1

MANUFACTURER AND MODEL:

Make: *Innov-X Systems, Inc.*
Models: *LBP4000 with software version 1.4 and higher*
Source: *X-ray tube*

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Inspection mode, variable reading time.

XRF CALIBRATION CHECK LIMITS:

1.0 to 1.1 mg/cm ² (inclusive)

SUBSTRATE CORRECTION:

Not applicable

INCONCLUSIVE RANGE OR THRESHOLD:

INSPECTION MODE READING DESCRIPTION	SUBSTRATE	INCONCLUSIVE RANGE (mg/cm ²)
Results not corrected for substrate bias on any substrate	Brick	0.6 to 1.1
	Concrete	0.6 to 1.1
	Drywall	0.6 to 1.1
	Metal	0.6 to 1.1
	Plaster	0.6 to 1.1
	Wood	0.6 to 1.1

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted on 146 test locations, with two separate instruments, in December 2005.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm^2 in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm^2 film).

If the average (rounded to 1 decimal place) of three readings is outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instrument into control before XRF testing proceeds.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm^2 for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm^2 at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm^2 . Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.

Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.

For each substrate type (the 1.02 mg/cm^2 NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):

$$\text{Correction value} = (1\text{st} + 2\text{nd} + 3\text{rd} + 4\text{th} + 5\text{th} + 6\text{th Reading}) / 6 - 1.02 \text{ mg/cm}^2$$

Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and the retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF readings.

Compute the average of all ten re-test XRF readings.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the variable-time inspection paint test mode, the instrument continues to read until it has determined whether the result is positive or negative (with respect to the 1.0 mg/cm² Federal standard), with 95% confidence. The following table provides testing time information for this testing mode.

Testing Times Using Variable Reading Time Inspection Mode (Seconds)						
	All Data			Median for laboratory-measured lead levels (mg/cm ²)		
Substrate	25 th Percentile	Median	75 th Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb
Wood, Drywall	2.1	2.3	5.4	2.2	5.4	2.2
Metal	2.6	3.2	5.3	2.7	5.1	5.1
Brick, Concrete, Plaster	3.1	4.0	5.7	3.2	4.0	5.9

CLASSIFICATION OF RESULTS:

When an inconclusive range is specified on the *Performance Characteristic Sheet*, XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. If the instrument reads "> x mg/cm²", the value "x" should be used for classification purposes, ignoring the ">". For example, a reading reported as ">1.0 mg/cm²" is classified as 1.0 mg/cm², or inconclusive. When the inconclusive range reported in this PCS is used to classify the readings obtained in the EPA/HUD evaluation, the following False Positive, False Negative and Inconclusive rates are obtained:

FALSE POSITIVE RATE: 2.5% (2/80)
 FALSE NEGATIVE RATE: 1.9% (4/212)
 INCONCLUSIVE RATE: 16.4% (48/212)

DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. XRF Performance Characteristic Sheets were originally developed by the MRI under a grant from the U. S. Environmental Protection Agency and the U.S. Department of Housing and Urban Development. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.